

elongate tubular metal body 112 with converging inner wedge surfaces 125. The tubular body 112 is provided with spaced threaded holes; screws 142 are threaded into the holes for securing the reinforcing bars. The threaded holes are arranged in a single row. The securing action of the coupler 112 is shown in Fig. 12. There is a three-point fixation of the bars in the coupler 112 as a result of the tightened screw 142 and the oppositely arranged projecting surfaces 125.

Michelson discloses a skeletal plating system. This patent is classified in U.S. Cl. 606 - surgery. The present invention relates to reinforcement bars in concrete construction; U.S. Cl. 403. It is not seen how a person skilled in the art of construction industry would look into the field of surgery for finding a solution to the problem of connecting rebar ends with one another.

Moreover, the device of *Michelson* is a plate that is connected to one side of a cylindrical body. The screws that are used for attachment penetrate deep into the bone material in order to attach the plate to the bone. Bone material is wedged between two angled screws. However, this has nothing to do with clamping a rod material by applying an external clamping force circumferentially at several locations onto the outer surface of the cylindrical member.

According to the examiner, the system of *Michelson* teaches an extremely stable engagement of the screws to the bar by diagonally crossing the screws thus trapping an area of the bar between them. It is respectfully submitted that trapping of the bone material in *Michelson* is realized by the screws penetrating into the bone material at an angle relative to one another instead of parallel to one another. When a force is applied to the plate in a direction away from the bone, the force will not act in the axial direction of screws (which can lead to the screw being pulled out) but at an angle thereto so that the screws form "hooks" within the bone material. It is the angled penetration of the bone material that provides the "extremely stable engagement of the screws" inside the bone.

The rebar ends to be connected should not be penetrated by screws so as not to affect the structural integrity. The rebar ends are only to be clamped within the sleeve by the clamping elements that apply a force onto the exterior of the rebar ends; the structure of the rebar ends is therefore not compromised by screw holes. The concept of *Holdsworth*

provides a safe three-point clamping fixation for a bar end within a sleeve. *Holdsworth* provides a simple solution because the three-point fixation requires only one screw to be tightened for each clamping point; the bar will center itself between the two abutment surfaces 125 and the screw tip.

According to *Holdsworth* only external clamping forces should act on the bar ends. The system of *Michelson* has no bearing on the **clamping concept** of *Holdsworth*. A person skilled in the art has no reason to look at *Michelson* because a penetration of the screws into the rebar ends is not desirable and because the arrangement of two staggered rows of screws is taught as a means for trapping material between the screws upon penetration thus providing improved engagement in regard to pulling forces on the plate, which is not useful in connection with *Holdsworth* as *Holdsworth* only applies external clamping forces on the circumference of the bar ends.

Claim 1 and its dependent claims are therefore not obvious in view of the cited references.

In comparison to *Holdsworth*, the present invention provides an innovative approach to the clamping of bar ends in a sleeve: instead of providing a complex and difficult to manufacture interior of the sleeve (in the form of a "clover leaf"), the present invention employs a simple round interior and employs two rows of screws on the same side of the sleeve (pipe section) so that the two rows provide adjustable abutments relative to the opposite inner wall of the sleeve that provides the third fixation point.

Reconsideration and withdrawal of the rejection of the claims 1-12 pursuant to 35 USC 103 are therefore respectfully requested.

CONCLUSION

In view of the foregoing, it is submitted that this application is now in condition for allowance and such allowance is respectfully solicited.

Should the Examiner have any further objections or suggestions, the undersigned would appreciate a phone call or e-mail from the examiner to discuss appropriate amendments to place the application into condition for allowance.


Authorization is herewith given to charge any fees or any shortages in any fees required during prosecution of this application and not paid by other means to Patent and

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